

112 Rejections

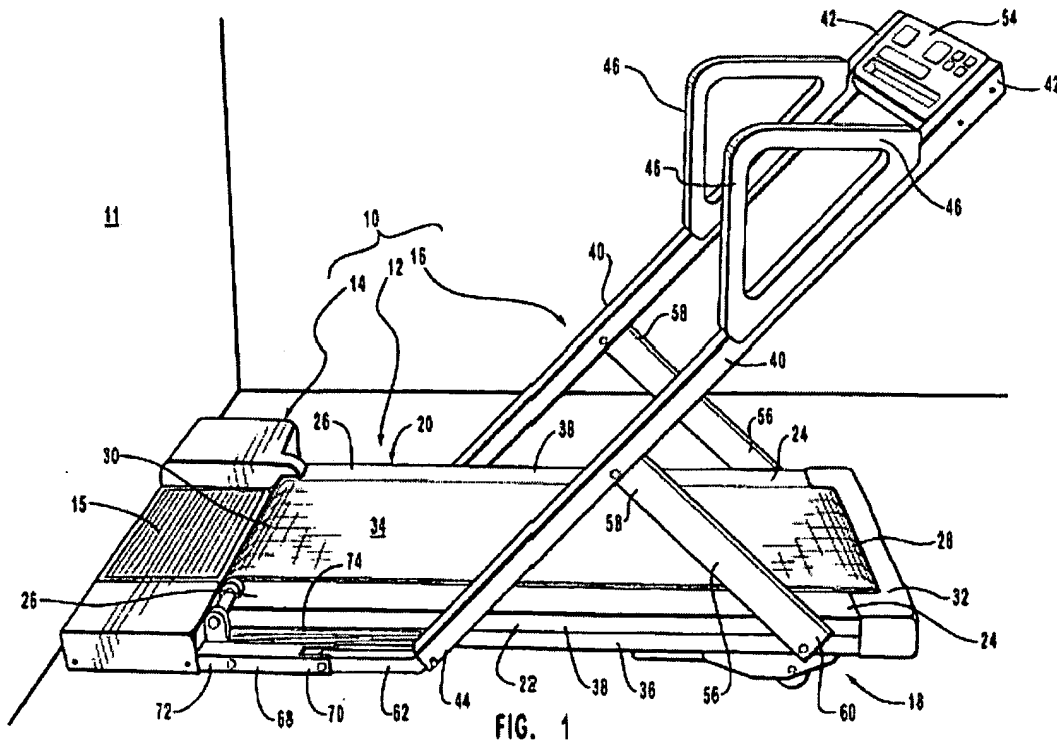
6. Claim 29 has been amended to cite a “disengagement member”.

§102 Rejection of claims 28-29 based on Daleabout '834

7. Applicant respectfully traverses the §102 rejection of claims 28 and 29 based on Daleabout (U.S. Patent No. 5,889,834). Daleabout Figures 1 and 3 show frame members which are hinged at one end of the frame members so that the frame member is folded vertically. Claim 28 has been amended to recite a hinge which permits the front and rear rail sections to be folded with respect to each other. The amended claim recites a structure that is not anticipated by the '834 patent. Applicant notes that while the specification cites a “middle hinge 240”, the hinge need not be positioned in the center of the rail. FIGs. 1 and 2 show an example where the front rail sections are shorter than the rear rail sections.

Claim 29 has been amended to recite a “disengagement member”.

Daleabout '834



§103 Rejection of claims 1-2 and 4-6 based on Endelman '685 in view of Daleabout

8. Applicant respectfully traverses the §103 rejection of claims 1-2 and 4-6 based on Endelman '685 in view of Daleabout. Endelman FIG. 1 (shown below) discloses a reformer. Endelman does not disclose rails having hinges. Daleabout Figures 1 and 3 show frame members which are hinged at one end of the frame members so that the frame member is folded vertically. Claim 1 has been amended to recite a hinge which permits the front and rear rail sections to be folded with respect to each other. Daleabout teaches away from the current invention. Claims 2, 4 and 5 have been amended to recite structural elements. Claims 2, 4, 5, and 6 are dependent upon amended claim 1.

§103 Rejection of claim 7 based on Endelman '685 in view of Endelman (PG Pub '227)

9. Applicant respectfully traverses the §103 rejection of claim 7 based on Endelman '685 in view of Endelman (PG Pub '227). Claim 7 is dependent upon amended claim 1. Neither Endelman '685 nor Endelman '227 application disclose a foldable reformer as claimed in the current invention.

Claims 3 and 8-22 and 30-33

10. Claims 3 and 8-22 are dependent upon amended claim 1.
11. Claims 30-33 are dependent upon amended claim 28.

Grammatical Corrections

12. Claim 19 has been amended to clarify that the rail sections may rotate with respect to the base pole sections.
13. Claim 20 has been amended to correct the term “folding” to “folded”.
14. Claim 31 has been amended to clarify that ropes or straps may be pulled through a pulley when the pulley is at various heights and the carriage is at various positions.

New Claims 37, 38, 39 and 40

15. New claim 37 has been added. Support for claim 37 is in page 8 lines 10-14, and page 12, lines 5-10 which describe the folding and the foot base rollers:

“The reformer may be folded into an upright position by lifting up on the lift handle **250**, which also acts as a stabilizing bar between rail sections **200** and **203**. The lift handle is raised until the base **180** is pulled over the inclined face **102** of the head base **100**. The folding of the rails is assisted by head rail hinges **260** which permit rail sections **201** and **203** to rotate with respect to the head base poles **120**.” [8:10-14]

“Referring now to Fig. 4, which is a front perspective view of the folded reformer and to Fig. 5 which is a rear perspective view of the folded reformer, each reformer rail may be folded along a middle hinge **240** located between the frame rail sections on each rail so as the rails are folded, foot base rollers **182** on the base support roll up the front incline surface of the head base until the unit is snapped into a closed position with the rail sections resting in base rail supports **170**.” [12:5-10]

16. New claim 38 has been added. Support for claim 38 is in page 8 lines 3-5; and page 12, lines 5-16 which describe the rotatable risers:

“In another set of exercises, the user typically pulls the platform by means of a rope, cable or strap through pulleys **154** which are each mounted on a rotatable risers **140**.” [8:3-5]

“Referring now to Fig. 4 ... The rotatable risers **140** have been rotated 90° on the head base poles **120** in order to provide room for the rear rail sections to fold upward. In this embodiment the wheels are preferably roller blade or inline roller wheels. Finger guards **241** cover the hinges **240** as the unit is raised and lowered.” [12:5-16]

17. New claim 39 has been added. Support for claim 40 is in FIGs. 1, 2, 4, and 6; and page 8 lines 1-7; page 13 line 20 through page 14 line 1, and page 15, lines 4-8 which describe exercises with and without the pole extensions, and the vertical adjustment of the pulley mechanism:

“The head base includes wheels **104** and head base poles **120**.” [8:1-2]

“In another set of exercises, the user typically pulls the platform by means of a rope, cable or strap through pulleys **154** which are each mounted on a rotatable risers **140**. The user pulls the straps through the pulleys lying supine or prone, standing, or sitting on the carriage, facing back, front, or sideways, depending on the exercise. The pulley height may be adjusted as discussed below.” [8:3-7]

” Please amend the paragraph beginning on line 10 of page 8 as follows: Referring now to Fig. 6, which is a front perspective view of a reformer with pole extensions, additional Pilates exercises can be performed with the pole extensions **122** and the push through bar **125**. The pole extensions may be secured to the base pole with head base pole bushings **121** which fit inside the ends of both the base poles and the extensions, and have spring pins to engage holes in the base poles and extensions.” [13:20-14:1]

"Referring now to Fig. 12 is an exploded diagram of a pulley and support, the pulley adjustment mechanism includes an adjustment slot **144** (not shown) on the pulley riser **140** (not shown) such that a pulley adjustment knob **150** may be slid up or down in the slot to change the height of the pulley and then tightened appropriately. The pulley adjustment knob has a threaded stud **151** which travels in the slot." [15:4-8]

18. New claim 40 has been added. Support for claim 39 is in FIG. 9 and page 11 line 20 through page 12 line 4 which describe the adjustment bar:


"Referring now to Fig. 9, which is a side cross sectional view of the carriage showing the gear bar and spring adjustment mechanism. The spring gear bar **410** is held in a slot on the spring gear bar adjustment plates **415** by a retaining spring **431**. The spring gear bar may be disengaged from the slot by a disengagement member **430**. In one embodiment, that disengagement member is a cable with a loop **401**, or other handle, which may be pulled by the user from the rear of the carriage. Alternately, the cable may be replaced with a solid rod or other apparatus which causes the gear spring bar to be released from its retention slot." [11:20-12:4]

Applicant believes that the amended claims are in condition for allowance.

Thank you for your continued assistance in this application.

Respectfully submitted,

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Please amend the specification as follows:

Please amend the paragraph beginning on line 10 of page 8 as follows:

In another set of exercises, the user typically pulls the platform by means of a rope, cable or strap through pulleys **154** which are each mounted on a rotatable riser[s] **140**. The user pulls the straps through the pulleys lying supine or prone, standing, or sitting on the carriage, facing back, front, or sideways, depending on the exercise. The pulley height may be adjusted as discussed below.

Please amend the paragraph beginning on line 10 of page 8 as follows:

The reformer may be folded into an upright position by lifting up on the lift handle **250**, which also acts as a stabilizing bar between rail sections **200** and **203**. The lift handle is raised until the base **180** is pulled over the inclined face **102** of the head base **100**. The folding of the rails is assisted by head rail hinges **260** which permit rail sections **201** and **203** to rotate with respect to the head base poles **120**. (In FIG. 2, element **260** points to a protective box which covers a head rail hinge.)

Please amend the claims as follows:

1. (Amended) An exercise apparatus comprising:

a generally rectangular frame

5 having a head end,

a foot end,

a hinged left rail having a hinge positioned between a front section and a rear section, such that the front section and the rear section may be folded,

at the hinge, so that its front and rear section may be folded to a

10 substantially vertical positions, and

a hinged right rail, parallel to the left rail, the right rail having a hinge positioned between a front section and a rear section, such that the front

section and the rear section may be folded, at the hinge, so that its front

and rear section may be folded to a substantially vertical positions;

15 a movable carriage mounted on the frame, such that the carriage may be moved along the left rail and right rail between the head and foot ends, the carriage having a generally flat upper surface, a pair of spaced shoulder pads mounted to said upper surface and a head rest;

a plurality of spring members having a first end connected to the underside of the carriage and a second end connected to the foot end of the frame; and

20

a foot support assembly mounted to the frame near the foot end.

2. (Amended) The exercise apparatus of claim 1 ~~wherein~~ further comprising

the an adjustable head rest, such that the head rest is adjustable to a first flat

25 position; a second inclined position and a third inclined position ~~in~~ with respect to the carriage mat.

3. (Original) The exercise apparatus of claim 1 further comprising

30 a Pilates long/short box with partially open long wall surfaces, such that the box may be interchangeably positioned

lengthwise on the carriage, in order to perform a first set of reformer exercises;

crosswise on the carriage, in order to perform a second set of reformer exercises; and

5 lengthwise across the carriage side rails at the head of the frame, in order to perform chair exercises.

4.(Amended) The exercise apparatus of claim 1 ~~wherein~~ further comprising
 the an adjustable foot support assembly ~~may be adjusted~~.

10

5. (Amended) The exercise apparatus of claim 1 ~~wherein~~ further comprising
 the a hinged headrest and shoulder pad assembly, such that the assembly may be
 rotated away and downward from the carriage surface so that a conversion mat
 may be positioned on the reformer frame in order to provide a flat work surface
 15 for other exercises.

15

6. (Original) The exercise apparatus of claim 1 further comprising
 a first pole section in proximity to the head of the left rail; and
 a second pole section in proximity to the head of the right rail.

20

7. (Original) The exercise apparatus of claim 6 further comprising
 a first pole extension section removably inserted in the first pole section; and
 a second pole extension section removably inserted in the second pole section.

25 8. (Original) The exercise apparatus of claim 6 further comprising
 a right adjustable and flexible pulley mechanism mounted on a right riser mounted
 on the first pole section, the right pulley mechanism comprising
 a pulley bracket support having a height adjustment means,
 a pulley mount,
 30 a pulley roller core, and

30

a flexible, articulating connection means between the pulley bracket support and the pulley mount, such that the pulley bracket mount may move relative to the pulley bracket support in order to reduce binding of the pulley during operation; and

5 a left adjustable and flexible pulley mechanism mounted on a left riser mounted on the second pole section, the right pulley mechanism comprising.

a pulley bracket support having a height adjustment means,

a pulley mount,

a pulley roller core, and

10 a flexible, articulating connection means between the pulley bracket support and the pulley mount, such that the pulley bracket mount may move relative to the pulley bracket support in order to reduce binding of the pulley during operation.

15 9. (Original) The exercise apparatus of claim 8 wherein

the pulley roller core is interchangeable to accommodate either ropes or flat straps.

10. (Original) The exercise apparatus of claim 8 wherein

20 the flexible connection means is selected from the group consisting of a cable, two interlocking eyebolts, or one eyebolt interlocking with a mount integral to the pulley bracket.

11. (Original) The exercise apparatus of claim 8 wherein

25 the pulley bracket is mounted on a riser such that the riser may be rotated from a first position wherein the pulleys are positioned between the pole sections and the carriage mat, so that the user may operate ropes or straps while in a reformer mode,
to a second position wherein the bracket secures a box positioned on the rails
30 when the reformer is used in a chair mode, and

a third position wherein the bracket is rotated out of the way for storage when the reformer is used in a pole system mode.

12. (Original) The exercise apparatus of claim 8 wherein

5 a riser is mounted on the pole section; and
the height adjustment means comprises a slot in the riser, such that the pulley mount may be positioned at different heights in the slot.

13. (Original) The exercise apparatus of claim 1 further comprising

10 a spring adjustment mechanism, such that the first end of the spring members are connected to a spring gear bar which may be placed in various positions in a spring bar adjustment bracket attached to the carriage in order to adjust the distance of the carriage from the foot end, such that the various positions set the carriage at variable distances in relation to the foot bar, thereby enabling the
15 accommodation of different body types.

14. (Original) The exercise apparatus of claim 13 wherein

there are at least four carriage positions, such that three positions are Pilates one, two, and three carriage positions, and a fourth position is a negative one position,
20 wherein the carriage is closer to the foot base than in the one position.

15. (Original) The exercise apparatus of claim 13 further comprising

a plurality of markings on at least one rail, such that each marking represents a proper carriage position corresponding to spring bar adjustment bracket position.
25

16. (Original) The exercise apparatus of claim 13 further comprising

a means for a user to change the position of the spring gear bar in the spring bar adjustment bracket without disembarking from the carriage.

30 17. (Original) The exercise apparatus of claim 16 further comprising

a release mechanism such that the spring gear bar may be removed from a position in the spring bar adjustment bracket when the release mechanism is engaged; and a retention mechanism such that the spring gear bar may be held in a position in the spring bar adjustment bracket when the release mechanism is disengaged.

5

18. (Original) The exercise apparatus of claim 17 wherein

the release mechanism is selected from the group consisting of at least one cable, such that pulling on the cable engages the release mechanism, and releasing the cable disengages the release mechanism; or at least one rigid bar, such that pulling on the bar engages the release mechanism, and releasing the bar disengages the release mechanism.

10

19. (Amended) The exercise apparatus of claim 1 further comprising

a left base pole located near the head end of the left rail, such that the left base pole supports the left rail front section;

15

a left rail front pivot means, such that the left rail front section may rotate with respect to the left base pole;

a right base pole located near the head end of the right rail, such that the right base pole supports the right rail front section; and

20

a right rail front pivot means, such that the right rail front section may rotate with respect to the right base pole.

20. (Amended) The exercise apparatus of claim 19 further comprising

a foot base, the foot base including at least one wheel such that the foot base may roll toward the head as the left rail is folded along the left hinge and the right rail is folded along the right hinge; and

25

a head base located near the head of the left rail and right rail, such that the left base pole and the right base pole are supported in the head base, and such that the head base remains stationary while the foot base is rolled into a ~~folding~~ folded position.

30

21. (Original) The exercise apparatus of claim 20 wherein

the head base has at least one wheel such that once the unit is folded into a vertical folded position, the folded apparatus may be moved by rolling it on the wheel.

22. (Original) The exercise apparatus of claim 21 wherein

the foot head base has at least two wheels; and
the head base has a rear inclined face such that the wheels may be rolled up the inclined face as the unit is rolled into a vertical folded position.

23. (Original) An exercise apparatus comprising:

a generally rectangular frame having

a head end

a head end support including a head base with at least two wheels, a left base pole and a right base pole,

a left riser mounted on the left base pole,

a right riser mounted on the right base pole,

a foot end,

a wheeled foot end support,

a left rail comprising

a left rail front section,

a left rail front section pivot support integral to the left base pole,

a left rail rear section,

a left rail hinge connecting the left rail front section and the left rail rear section, such that the left rail front section may be folded with respect to the left rail rear section,

a right rail comprising

a right rail front section,

a right rail front section pivot support integral to the right base pole,

a right rail rear section,

a right rail hinge connecting the right rail front section and the right rail rear section, such that the right rail front section may be folded with respect to the right rail rear section;

5 a movable carriage mounted on the frame, such that the carriage may be moved along the left rail and the right rail between the head end and the foot end, the carriage having a generally flat upper surface, a pair of spaced shoulder stops mounted to said upper surface and an adjustable head rest;

an height-adjustable and flexible left pulley mechanism attached to the left riser;

10 an height-adjustable and flexible right pulley mechanism attached to the right riser;

a plurality of interchangeable springs having a first end connected to a rod which may be positioned into one of several slots affixed to the underside of the carriage and a second end connected to the foot end of the frame;

15 a gear mechanism to assist in changing the position of the rod from one slot to another slot; and

an adjustable foot support assembly mounted to the frame near the foot end.

24. (Original) The exercise apparatus of claim 23 further comprising

20 a means for removably securing a Pilates long/short box over the head portion of the left rail and the right rail, thereby permitting Pilates chair exercises on the box.

25. (Original) The exercise apparatus of claim 23 further comprising

25 a means for inverting the headrest so that a separate mat be placed over a portion of the left rail and the right rail, thereby permitting Pilates mat exercises on the mat and carriage.

26. (Original) The exercise apparatus of claim 23 further comprising

a means for removably attaching a left pole extension on the left base pole; and

a means for removably attaching a right pole extension on the right base pole, such that a push through bar may be positioned between the left pole extension and the right pole extension, thereby permitting Pilates pole exercises.

5 27. (Original) The exercise apparatus of claim 23 wherein

there are at least four slots, such that three slots correspond to Pilates one, two, and three carriage positions, and a fourth slot corresponds to a negative one position, wherein the carriage is closer to the foot base than in the one position.

10 28.(Amended) An improved reformer, the improvement comprising:

A first ~~hinged~~ rail comprising a hinge positioned between a front rail section and a rear rail section, such that the first rail may be folded from an extended position into an upright position where the front rail section is substantially parallel to the rear rail section; and

15 A second ~~hinged~~ rail comprising a hinge positioned between a front rail section and a rear rail section, such that the second rail may be folded from an extended position into an upright position where the front rail section is substantially parallel to the rear rail section.

20 29. (Amended) The improved reformer of claim 28 further comprising

a ~~means for~~ disengagement member which permits a user to change the position of the spring gear bar in the spring bar adjustment bracket without disembarking from the carriage.

25 30. (Original) The exercise apparatus of claim 29 further comprising

a release mechanism such that the spring gear bar may be removed from a position in the spring bar adjustment bracket when the release mechanism is engaged; and a retention mechanism such that the spring gear bar may be held in a position in the spring bar adjustment bracket when the release mechanism is disengaged.

31. (Amended) The improved reformer of claim 28 further comprising
 a rotatable pulley assembly such that ropes ~~and~~or straps may be pulled through a
 pulley from various positions of the carriage, when the pulley is at ~~in~~ various
 heights, ~~of the pulley~~ without bind.

5

32. (Original) The improved reformer of claim 28 further comprising a pole assembly,
 the pole assembly comprising
 a head base;
 a right head base pole;
 10 a left head base pole;
 a right pole extension removably attached to the right head base pole;
 a left pole extension removably attached to the left head base pole; and
 a push through bar attached to the right pole extension and the left pole extension,
 such that Pilates pole exercises may be conducted on the reformer and pole
 15 assembly.

10

15

33. (Original) The improved reformer of claim 28 further comprising
 a Pilates long/short box with partially open long wall surfaces, such that the box
 may be interchangeably positioned
 20 lengthwise on the carriage, in order to perform a first set of reformer
 exercises;
 crosswise on the carriage, in order to perform a second set of reformer
 exercises; and
 lengthwise across the carriage side rails at the head of the frame, in order
 25 to perform chair exercises.

20

25

34. (Original) An interchangeable Pilates exercise system comprising
 a reformer comprising
 a pair of carriage rails, and

a movable carriage including a foldable headrest and shoulder rest assembly, such that the assembly may be folded to a flat position; a pole extension assembly removably attachable to the reformer, such that pole exercises may be performed on the pole extension; and

5 a modified long/short box, such that the box may be placed lengthwise or crosswise on the carriage for reformer exercises, or placed on the carriage rails to perform chair exercises.

35. (Original) The exercise system of claim 34 further comprising

10 a removable mat which may be placed over the carriage rails and the folded down headrest and shoulder rest assembly to create a flat surface in conjunction with the carriage.

36. (Original) A method for storing and transporting a reformer exercise apparatus having

15 a first rail, a first rail head section, a first rail head section support, a first rail foot section, and a first rail foot section support, and a second rail, a second rail head section, a second rail head section support, a second rail foot section, and a second rail foot section support, the method comprising

20 folding the reformer frame from an extended lateral position to a vertical folded position by

lifting the frame near the hinged intersection of the first rail head section and the first rail foot section and near the hinged intersection of the second rail head section and the second rail foot section,

rolling the first rail foot sections and the second rail foot section toward

25 the head of the reformer,

pivoting the head section of the first rail on its head section support,

pivoting the head section of the second rail on its head section support,

continuing to roll the first rail foot sections and the second rail foot section toward the head of the reformer until the reformer is in a folded vertical

30 position;

securing the reformer into a folded vertical position;
 tilting the folded reformer so that wheels on the right and left head section
 supports contact the floor;
 rolling the folded reformer to a desired position; and
 5 tilting the reformer back into a vertical position.

37. (New) An exercise apparatus, for placement on a support surface, the exercise
 apparatus comprising:

a generally rectangular frame

- 10 having a head end,
- a foot end having at least one foot base roller,
- a hinged left rail and a hinged right rail, each rail comprising
 - a front section having a first end pivotally attached to the head end
 - of the frame, and a second end connected to a hinge, and
 - 15 a rear section having a first end connected to the hinge, and a
 - second end attached to the foot end,
 - such that each rail may be folded at its hinge, and such that the second
 - ends of the rear sections are supported by the foot base roller and remain
 - in proximity to the support surface as the rails are folded;
 - 20 a movable carriage mounted on the frame, such that the carriage may be moved
 - along the left rail and right rail between the head and foot ends, the carriage
 - having a generally flat upper surface, a pair of spaced shoulder pads mounted to
 - said upper surface and a head rest;
 - a plurality of spring members having a first end connected to the underside of the
 - 25 carriage and a second end connected to the foot end of the frame; and
 - a foot support assembly mounted to the frame near the foot end.

38. (New) An exercise apparatus comprising:

- 30 a generally rectangular frame

having a head end,
 a foot end,
 a left rail having a head end and a foot end, and
 a right rail having a head end and a foot end;

5 a movable carriage mounted on the frame, such that the carriage may be moved
 along the left rail and right rail between the head and foot ends, the carriage
 having a generally flat upper surface, a pair of spaced shoulder pads mounted to
 said upper surface and a head rest;
 a plurality of spring members having a first end connected to the underside of the
 10 carriage and a second end connected to the foot end of the frame;
 a foot support assembly mounted to the frame near the foot end;
 a first pole section in proximity to the head end of the left rail, and a second pole
 section in proximity to the head end of the right rail, each pole section comprising
 a rotatable riser, such that the riser may be set at a first position oriented
 15 between the pole sections, and set at a second position, the second position
 being rotated away from the first position and away from the rails.

39. (New) The exercise apparatus of claim 38 further comprising

20 a first pole section in proximity to the head end of the left rail, and a second pole
 section in proximity to the head end of the right rail, each pole section comprising
 a rotatable riser, such that the riser may be set at a first position oriented
 between the pole sections, and set at a second position, the second position
 being rotated away from the first position and away from the rails, and
 a vertically adjustable pulley mechanism mounted on the riser, such that
 25 the pulley mechanism may be set at a desired height relative to the riser,
 and such that a user may perform a first set of exercises with the pulley
 mechanisms;
 a removable first pole extension section, such that the first pole extension section
 may be secured to the first pole section, and

a removable second pole extension section, such that the second pole extension section may be secured to the second pole section, such that the user may perform additional exercises with the pole extension sections.

5

40. (New) An exercise apparatus comprising:

a generally rectangular frame

having a head end,

a foot end,

10

a left rail having a head end and a foot end, and

a right rail having a head end and a foot end;

a movable carriage mounted on the frame, such that the carriage may be moved along the left rail and right rail between the head and foot ends, the carriage having a generally flat upper surface, a pair of spaced shoulder pads mounted to said upper surface and a head rest;

15

a foot support assembly mounted to the frame near the foot end;

a plurality of spring members having a first end connected to the underside of the carriage and a second end connected to the foot end of the frame; and

a spring adjustment mechanism, such that the first end of the spring members are connected to a spring gear bar which may be placed in various positions in a spring bar adjustment bracket attached to the carriage in order to adjust the distance of the carriage from the foot end, such that the various positions set the carriage at variable distances in relation to the foot bar, thereby enabling the accommodation of different body types.

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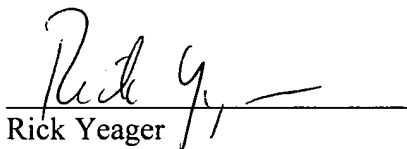
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I hereby certify that the following correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date shown above and is addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

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AMENDMENTS AND RESPONSE TO OFFICE ACTION

15


Rick Yeager